

Appln. No. 10/087276

Attorney Docket No. 10541-1200

II. Remarks

Reconsideration and re-examination of this application in view of the above amendments and the following remarks is herein respectfully requested.

After entering this amendment, claims 1-6 and 8-14 remain pending.

Rejections – 35 U.S.C. § 112

Claim 3 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite on the basis that it fails to clearly define how the pin end is protected in the channel. Claim 3 has been amended to clarify the means by which the pin is protected. Accordingly, it is believed that this rejection is now moot and should be withdrawn.

Claim 6 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite on the basis that the limitation "the exit" lacked sufficient antecedent basis. Claim 2 has been amended to establish sufficient antecedent basis. Accordingly, it is believed that this rejection is now moot and should be withdrawn.

Claim 12 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite on the basis that the limitation "the socket" lacked sufficient antecedent basis. Claim 12 has been amended to depend from Claim 11 establishing sufficient antecedent basis. Accordingly, it is believed that this rejection is now moot and should be withdrawn.

Further Claim Clarifications

Prior to discussing the cited references, it is believed that a brief discussion on the current form of the independent claims of this application is warranted. The original independent claim 2 of this application has been amended to clarify, more

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particularly to point out and distinctly claim that which applicant regards as the subject matter of the present invention. Specifically, the claims now clearly recite that the invention is an assembly having a carrier and an electrical module. The carrier typically acts as a manufacturing aid and provides protection to the pins of the electrical module before installation on a circuit board. Further, the claims now particularly point out and distinctly claim a movable pin guide on the carrier. The pin guide is designed such that the pins may move freely through the guide, but still provide protection to the ends of the pins when the guide is in its neutral position. Axial pressure (in the direction of the pin axes) on the pin guide will move the guide and expose the pins. In this state, the guide aids in alignment of the pins prior to insertion into a socket or circuit board. Removing axial pressure will cause the pin guide to return to its neutral position and resume protecting the pins.

Rejections – 35 U.S.C. § 102

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,954,094 ("Humphrey"). Applicant respectfully traverses these rejections.

Humphrey discloses gimbals for mounting an electrical connector that tolerates misalignment between connector halves by permitting the connector to slide and rotate within a series of frames. Humphrey, col. 2, lines 45-66. The rotational and planar movement is achieved as a result of inflexible cylindrical studs (28 & 40) rotating and sliding within elongated stud receiving slots (20 & 30) oriented transversely with respect to the longitudinal axis of the pins. *Id.* at col. 2, lines 13-33. From this, it is submitted that Humphrey fails to disclose any flexible portion that allows axial movement in a direction parallel to a connection axis. The inflexible

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cylindrical studs (28 & 40) disclosed in Humphrey only permit planar and rotational movement perpendicular to a connection axis by moving within a transverse slot (20 & 30). The rejection based thereon should accordingly be withdrawn.

Claim 2 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,592,387 ("Komenda"). Applicant respectfully traverses these rejections.

As noted by the Examiner, Komenda discloses an electronic assembly that aids in the blind mating of electrical connectors. Komenda accomplishes this by mounting a male or female electrical connector (500), such as a D-sub connector, on a mounting plate (502). Komenda, col. 4, lines 34-37. This assembly is attached to a main plate (504) using guide pins (510) and springs (508) and is designed to mate with an appropriate matching connector (600) installed in a panel (602). *Id.* at lines 49-61, 66-67. When the connector (500) is installed into the mating connector (600), the springs (508) allow the connector (500) to float, correcting for any misalignment. *Id.* at col. 5, lines 19-22. The springs (508) also help push the connectors together and prevent them from separating. *Id.* at lines 40-57.

From this, it is submitted that Komenda fails to disclose a pin guide with one or more channels extending through the guide having both an entrance and an exit. Furthermore, Komenda fails to disclose a pin guide that is not attached to any pins of the electronic module, allowing the guide to move along a connection axis independently of the pins. Finally, Komenda fails to disclose an electronic assembly with electronic connection pins received by channels in a pin guide that is part of the frame. The rejection based thereon should accordingly be withdrawn.

Claim 7 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,592,387 ("Komenda"). Since claim 7 has been canceled, this rejection is now moot and should accordingly be withdrawn.

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Claim 10 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,556,286 ("Ikesugi"). Applicant respectfully traverses these rejections.

As noted by the Examiner, Ikesugi discloses a circuit board assembly that improves the board-to-board connection between circuit boards by permitting greater tolerance of misalignment. Ikesugi, col. 2, lines 35-39. This is accomplished this by installing a receptacle (201) on a printed circuit board (220). Ikesugi, col. 5, lines 23-25. The receptacle is made with a housing (222) designed with an angled flange (202) that allows the receptacle to rock about a centerline running perpendicular to its connection axis P-P. *Id.* at lines 29-34, and Fig. 3. A similar plug (204) is installed on an opposing circuit board. *Id.* at col. 6, lines 1-6. From this, it is submitted that Ikesugi fails to disclose any flexible portion that permits a pin guide to move axially, parallel to the connection axis. The rejection based thereon should accordingly be withdrawn.

Rejections – 35 U.S.C. § 103

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,437,558 ("Sakuraoka"). Applicant respectfully traverses this rejection.

Sakuraoka individually fails to disclose or suggest the features of the present invention, namely a carrier with pin guides and pins that are part of the electronic module. The motivation of Sakuraoka is to protect the ends of the pins from being bent during assembly. Sakuraoka, col. 1, lines 26-40. Therefore, the pins (12) are protected within the frame (14), which is separate from the channels (16) and pin guide (18) that form part of the component (10). *Id.* at Fig. 1. Reversing the location of the pins would either leave the pins exposed and subject to damage, or

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completely enclosed within the pin guide and incapable of forming an electrical connection. For these reasons, there is no motivation in Sakuraoka to suggest reversing the essential working parts of the device, as doing so would defeat the purpose of the device. As such, it must be concluded that Sakuraoka cannot render the claims of the present application as obvious. The rejection under § 103(a) is therefore improper and should be withdrawn.

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,437,558 ("Sakuraoka"). Applicant respectfully traverses this rejection.

The above arguments regarding Sakuraoka are equally applicable in this instance. Specifically, there is no motivation in Sakuraoka to suggest reversing the essential working parts of the device, as doing so would defeat the purpose of the device. As such, it must be concluded that Sakuraoka cannot render the claims of the present application as obvious. The rejection under § 103(a) is therefore improper and should be withdrawn.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present form of the claims are patentably distinguishable over the art of record and that this application is now in condition for allowance. Such action is requested.

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Date

Respectfully submitted,


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